Tuning Of A Fuzzy Logic Power System Stabilizer Using Geneticalgorithms

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Summary

A Hybrid Power System Stabilizer (HPSS) is presented. The proposed approach uses genetic algorithms (GA) to search for optimal or near optimal settings of fuzzy logic power system stabilizer (FLPSS) parameters. Incorporation of GA in FLPSSs design will add an intelligent dimension to these stabilizers and significantly reduce the time consumed in the design process. It is shown that the performance of FLPSS can be improved significantly by incorporating a genetic based learning mechanism. The performance of the proposed HPSS under different disturbances and loading conditions is investigated. The results show the superiority and robustness of the proposed HPSS as compared to classical PSS and its capability to enhance system damping over a wide range of loading conditions